

**AMENDMENTS TO THE ABSTRACT:**

Please substitute the Abstract with the following:

Equipment for controlling blood flow in an extracorporeal blood circuit, comprising at least a first sensor, designed to measure an arterial pressure upstream of a peristaltic pump, at least a second sensor, designed to measure an angular velocity of a peristaltic pump, a memory designed to store at least one set value of the desired blood flow through the access branch, a calibration function, and a control unit. The calibration function has at least variables (v1), related to the angular velocity of the pump, (v2), related to the arterial pressure in a portion of the access branch upstream of the peristaltic pump, (v3), related to an actual flow of blood through the access branch. The control unit is capable of calculating an actual flow value by applying the calibration function to the values of angular velocity and arterial pressure measured by the sensors, comparing the actual flow with the desired flow, and varying the angular velocity of the peristaltic pump if the actual flow value minus the desired flow lies outside a predetermined range.